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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,348	05/09/2001	Masahiro Naito	1190-0498P	3044

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EXAMINER	
NGUYEN, KIMNHUNG T	
ART UNIT	**PAPER NUMBER**
2674	10

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,348	NAITO ET AL.	
	Examiner	Art Unit	
	Kimnhung Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. The claims 1-11 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over figures 9-11 (admitted by Applicant) in view of Nobutani et al. (US patent 5,736,981) and in view of Hanami et al. (US patent 6,125,432).

Regarding claim 1, Prior Art in figure 9-11 disclose a display control device (7) including an image data writing means (1), a graphics memory (2) connected to the writing means, a data transfer means (3) responsive to a command from the writing means for reading data from the graphic memory, and transferring data to a display means (4). However, Prior Art of figures 9-11 do not disclose a write region detection means responsive to addresses accessed by the image data writing means for detecting a region including all the addresses being accessed. Nobutani et al. disclose in figure 4A, write region detection means (5, see rewrite detector 5, see column 11, lines 14-22). Hanami et al. disclose the addresses accessed by the image data writing (see image data transfer region, see column 8, lines 24-35, and see column 8, lines 55-66). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to utilize the teachings of Nobutani et al. including a write region and Hanami et al. with data transfer region as discussed above into the display system of Prior Art for producing the claimed invention because this would detect an address for accessing the display data memory and to cause the display controller to perform the partial rewrite operation (see Nobutani et al. of abstract), and for the data transfer to write operation and vice versa in order to carry out the precharging operation and the write operation concurrently, so that the pixel data can be transferred at a high data transfer rate and field data can be transferred independently (see Hanami et al. of abstract).

Regarding claim 11, Prior Art of figures 9-11 and Nobutani do not disclose, wherein said write region detection means detects minimum and maximum addresses among addresses within the graphics memory that have been accessed by said image data writing means, for detecting said region. Hanami et al. disclose a region detecting means for detecting minimum and maximum addresses (see storage location specified by one row address and one column address, see column 8, lines 24-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Hanami et al. et al. including a region detecting means for detecting minimum and maximum addresses as taught by Hanami et al. into the display system of Prior Art of figures 9-11 and Nobutani's system because this would for representing an image consisting of four pixels along the vertical directions and 256 pixels along the horizontal directions (see Hanami et al., column 8, lines 31-34).

3. Claims 2-6 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art of figures 9-11 in view of Nobutani et al. (US patent 5,736,981) and in view of Hanami et al. (6,125,432) as applied to claim1 above, and further in view of Shimizu (US patent 6,043,803).

Prior Art of figures 9-11, Nobutani et al. and Hanami et al. teach a display controller including an image data writing means (1), a graphics memory (2) connected to the writing means, a data transfer means (3) responsive to a command from the writing means for reading data from the graphic memory, and transferring data to a display means, and a write region detection means (5, see rewrite detector 5, see column 11, lines 14-22), and the addresses accessed by the image data writing as discussed above. Hanami et al. further more disclose the region from the vertical and horizontal direction address accessed by the writing means and rectangular region (see column 7, lines 53-64), and data writing means for detecting the region including all the addresses (see row address and column address, column 8, lines 24-34). However, Prior Art, Nobutani et al. and Hanami et al. do not disclose the minimum vertical direction address to the maximum vertical direction address among the address accessed by said image writing means, and from the minimum horizontal direction address to the maximum horizontal direction address among the address accessed by said image writings. Shimizu discloses a liquid crystal display apparatus connected minimum start position detecting circuit and maximum end position detecting circuit in a vertical sync and horizontal sync (see figure 3, column 5, lines 22-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shimizu a minimum start position detecting circuit and maximum end position detecting circuit in a vertical sync

and horizontal sync as taught by Shimizu into the display system of Prior Art, Nobutani et al. and Hanami et al. having the region including all the addresses for producing the claimed invention because this would be indicated a full size for screen from a horizontal sync and vertical sync signal.

4. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art of figures 9-11 cited by applicant in view of Hanami et al. (US patent 6,125,432) and in view of Shimizu (US patent 6,043,803).

Prior art of figures 9-11 disclose a machine-reable medium (liquid crystal driver circuit 6 reads the data from memory 5) having stored thereon a plurality of executable, the plurality of instructions comprising to access image data (1) and a memory (5) for transfer to the display screen (7). However, Prior Art of figures 9-11 do not disclose an image data region less than a full display screen of image data, a transfer image within the image data region and a region having rectangular region from a minimum vertical direction address to a maximum vertical direction address among the address being accessed. Hanami et al. disclose an image data region to addresses accessed by the image data writing (see image data transfer region, see column 8, lines 24-35, and column 8, lines 55-66) and an inherent less than a full display screen of image data and a region having rectangular region from a vertical direction address to a vertical direction address among the address being accessed (see column 7, lines 53-64). Shimizu discloses a minimum start position detecting circuit and maximum end position detecting circuit in a vertical sync and horizontal sync, (see figure 3, column 5, lines 22-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to

utilize the teachings of data region to addresses accessed by the image data writing as taught by Hanami et al. and Shimizu with a minimum start position detecting circuit and maximum end position detecting circuit in a vertical sync and horizontal sync as taught by Shimizu into the display system of Prior Art and Hanami et al. having all addresses for producing the claimed invention because this would be make a write operation and precharging operation can be concurrent carried out and hence the data transfer time can be reduce (see column 10, lines 29-31) and for minimum start position detecting circuit and maximum end position detecting circuit in a vertical sync and horizontal sync to indicate a full size for screen from a horizontal sync and vertical sync signal.

Response To Arguments

5. Applicant's argument filed on 10-01-03 has been fully considered but they are not persuasive.

Applicant argues that Nobutani, Hanami and Shimigu do not disclose a write region detection means responsive to addresses accessed by the image data writing means for detecting a region including all the addresses being accessed. However, examiner respectfully disagrees with the arguments because Nobutani et al. disclose a write region detecting means (see rewrite detector 5, see column 11, lines 14-22); Hanami et al. disclose the addresses accessed by the image data writing (see image data transfer region, see column 8, lines 55-66), and data writing

means for detecting the region including all the addresses (see row address and column address, column 8, lines 24-34). For these reasons, the rejections are maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709.**

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
March 10, 2004

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600